

Amendments to and Listing of the Claims:

This listing of claims replaces all prior versions, and listings, of claims in this application.

1-30. (Cancelled)

31. (Previously Presented) A data storage medium on which data is to be recorded by modulating the data to generate a plurality of recording modulation codes and irradiating a pulse-like light beam to the data storage medium, so that a plurality of recording marks and spaces which have lengths corresponding to the plurality of recording modulation codes are formed on the data storage medium, the data storage medium comprising a disc information area,

wherein the disc information area includes a region on which at least one of an irradiation information of the light beam to form the recording marks and a constitution information of the recording mark is to be recorded,

at least two of the plurality of recording marks are formed by the light beam emitted according to a recording pulse train, the recording pulse train comprising: a first pulse which is disposed at a front and forms a leading edge of the recording mark, a last pulse which is disposed at a backend and forms a trailing edge of the recording mark, and a multi-pulse train which is disposed between the first pulse and the last pulse and forms a center of the recording mark,

the multi-pulse train having a pulse period longer than T which represents a reference period of the recording modulation code,

the plurality of recording marks have different lengths represented by T with each other,

a number of pulses in each of the recording pulse trains is increased by one as the recording mark is increased in length by $2T$, and

a shortest recording mark and a second shortest recording mark are constituted of a single pulse, respectively.

32. (New) A device for reproducing information stored on the data storage medium defined by claim 31.

33. (New) A device for recording information stored on the data storage medium defined by claim 31 in accordance with the at least one of an irradiation information of the light beam to form the recording marks and a constitution information of the recording mark recorded in the disc information area of the data storage medium.